

# Intermontanus

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## NEW PUBLICATIONS

The long awaited book "*Reptile and Amphibian Variants: Colors, Patterns, and Scales*" by H. Bernard Bechtel is now at the printer's and should be available soon. The book, published by Krieger Publishing Company, has 224 pages and 223 color photographs. The price is \$64.50.

Reptiles and amphibians with conspicuously altered colors and patterns are often quite beautiful. The rarer and more bizarre anomalies and mutations are reported and illustrated in this fascinating book, which opens a window on a developing and complex field of inquiry. This book covers an arcane subject from the author's personal perspective.

Chapters are: Reptiles and amphibians; Biology of the skin; Genetics; Chromatophore biology; Participation of Chromatophores in color pattern; Function of coloration and pattern; Albinism; Albinism and hypomelanism in reptiles and amphibians; Axanthism; Leucism, piebaldism, and melanism; Anomalous patterns; Scalelessness, bicephaly, and hybrids; and Investigative breeding and artificial selection.

Krieger has recently published two classic herpetological texts by Carl Kauffeld, "*Snakes and Snake Hunting*" and "*Snakes: The Keeper and the Kept*." Carl Kauffeld, former director and curator of reptiles at New York's Staten Island Zoo and expert herpetologist, wrote these texts some time ago but they have a timeless quality that merits their reprinting to once again make them available to everyone interested in this fascinating field. *Snakes and Snake Hunting* recounts trips Mr. Kauffeld made over the years in his collecting from the Okeechobee swamps of Florida, to the barren Arizona desert, to New York State's Dutchess County. In *Snakes: The Keeper and the Kept*, Mr. Kauffeld wrote on how to successfully keep snakes in captivity with advice and instructions on their selection, housing, feeding, habits, and treatment of sickness and disease. Retrospectives by Robert T. Zappalorti have been added to these reprinted editions.

Orders for any of these books can be directed to Krieger Publishing Company, P.O. Box 9542, Melbourne, FL 32902-9542.

Penguin Books has recently published a paperback edition of Kathryn Phillips book *Tracking the Vanishing Frogs*. The price of the paperback is \$11.95. This book was reviewed in *Intermontanus* 3(4):29. I (Breck) believe anyone interested in amphibians, amphibian decline, conservation, or the environment would benefit by reading this book. It is a "good read".

You can order the book from Penguin Books, 375 Hudson Street, New York, NY 10014-3657 or your local book store.

## RESEARCH UPDATE

### TOAD HYBRID ZONE IN SOUTHERN UTAH

Brian Sullivan has been studying the southwestern toad (*Bufo microscaphus*) and Woodhouse's toad (*Bufo woodhousii*) in southern Utah for a number of years. Previous studies have focused on distribution and call variation of these toads in both Utah and Arizona. In his most recent paper, Sullivan discusses the *B. microscaphus*/*B. woodhousii* hybrid zone along the Virgin River. This hybrid zone was discussed by Frank Blair in the 1950's and Sullivan

compares his data with that of Blair.

The full citation and abstract for Sullivan's paper is: Sullivan, Brian K. 1995, Temporal stability in hybridization between *Bufo microscaphus* and *Bufo woodhousii* (Anura: Bufonidae): Behavior and morphology. *Journal of Evolutionary Biology*. 8:233-247.

**Abstract**—I analyzed temporal variation in hybridization between the southwestern toad (*Bufo microscaphus*) and Woodhouse's toad (*Bufo woodhousii*) along the Virgin River in southwestern Utah and northwestern Arizona. *Bufo woodhousii* is largely restricted to the floodplain of the Virgin River from southern Nevada to the vicinity of St. George, Utah. By contrast *B. microscaphus* is confined primarily to the tributaries of the Virgin River only occupying the Virgin River proper exclusive of *B. woodhousii* along its upper reaches east of La Verkin Creek. As in all other zones of sympatry for these bufonids, behavior and morphology provide clear evidence of hybridization at a number of sites along the Virgin River. Analysis of morphology and behavior indicates that the distribution of these taxa and their hybrids is largely unchanged relative to that documented forty years ago by Blair (1955). Comparisons of morphological hybrid index scores reveal slight shifts in relative numbers of parental taxa at only one site. Hybridization between these anurans has been relatively stable geographically, and may be related to the nature of the riparian habitat available for breeding.

## CURIOSITY CORNER

By Breck Bartholomew

We didn't receive any questions from UTAH members so I have included a question that was asked on one of the internet herpetological bulletin boards. I am sure some of you have questions, so let's hear them!

Q—I am interested in comparing lineage, reproduction, size, and visual appearance through genetics. The main species of interest is *Acrantophis dumerili*. Any help would be greatly appreciated.

Reply—Comparing lineage is relatively straight forward. There are several possible techniques, including DNA fingerprinting, RFLP analysis, and RAPD analysis. You could also use allozymes instead of DNA and it might be less expensive.

Reproduction, size, and visual appearance are virtually unattainable via DNA or other molecular techniques because environmental factors play a big part of each of them. This environmental effect is likely to begin very early in the life of the animal; possibly as early as the embryonic stage before the eggs are laid. Certainly incubation plays an important role. It has been shown in other snakes that incubation conditions (primarily temperature and moisture) can effect the size, visual appearance, and behavior of hatchlings. Other factors are likely to play important roles also. For example, temperature fluctuations are certainly important and can cause stripes in otherwise banded snakes as well as scale anomalies. Fluctuations in moisture may also effect the embryos as could things like oxygenation, and even altitude.

Some reptiles show a distinct trend towards larger clutch sizes in larger females, however this is not always the case. I don't know about Dumeril's boas. Each species or group of related species show a trend in reproductive effort. Some sea snakes have very few, but large young. Other snakes, like *Thamnophis* sp. may have several



small young. There is certainly going to be some variation within most species and within each individual female. The best bet is to keep your females in good condition and don't breed them every single year. In the wild Dumeril's boas probably breed every other year or every three years. Unfortunately in captivity we tend to breed them every year. This practice effects both clutch size and the length of time that the female is a reliable breeder.

Visual appearance is probably the most distressing aspect. I don't know how much is determined by genetics and how much is environmental. In *Lampropeltis* I suspect a fair amount of the coloration is environmental. Dumeril's on the other hand may be different. In any case, coloration is determined by a series of genes which work together. Because of this it is possible to breed two "beautiful" animals and end up with "average" or "ugly" offspring. The opposite is true also. The chance of this, however, is reduced in Dumeril's because a relatively small number of animals founded the captive population. Thus Dumeril's probably have a relatively high inbreeding co-efficient. Basically this means that you are unlikely to have a pair with substantially different alleles in the genes that determine coloration. Unfortunately, this also means that your overall allelic diversity is somewhat limited and the chance of having detrimental alleles expressed (i.e. homozygous recessives) is fairly high too. This is called inbreeding depression and it can lead to small clutches, increased frequency of stillborns, shortened life spans, small adult size, and a variety of other nasty things. Some breeders use inbreeding to obtain new color /pattern morphs (e.g., corn snakes, California kingsnakes, and Burmese pythons to name a few).

I assume you already have a colony of Dumeril's? If not, I would

suggest purchasing animals from a variety of breeders, but ask each breeder where their animals came from. Breeders who have been around for many years (and had their Dumeril's for many years) are probably safer. If possible try to purchase the same sex of (known) related animals. Unfortunately too many breeders only want to sell in pairs or trios. While you may be able to pick up a lone male, it's tough to find a single female. Personally, I would shoot for what ever you can get. If you buy only great looking animals (especially if they are from "some one's line" like the "Lamar" strain of Brazilian rainbow boas or the "Applegate" line of various colubrids) you are likely to artificially increase your inbreeding. Or in other words your overall heterozygosity will decrease and so will your average clutch size and survivorship.

By purchasing a variety of animals, some "beautiful," some "ugly" you are more likely to have a diverse and healthier line. You may also be surprized at how many nice looking offspring you get. As an additional benefit you can get better prices on "ugly" animals yet they still reproduce.

I hope this has answered your questions, although I didn't go into DNA much. Molecular biology can be quite complicated to explain and I would need to have a better idea of what you already know before I try to explain specifics.

#### Suggested Reading

- ALLSTEADT, J. AND J.W. LANG. 1995. Incubation temperature affects body size and energy reserves of hatchling American alligators (*Alligator mississippiensis*). *Physiological Zoology* 68(1):76-97
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- BURGER, J. 1990. Effects of incubation temperature on behavior of young black racers (*Coluber constrictor*) and kingsnakes (*Lampropeltis getulus*). *Journal of Herpetology* 24(2):158-163
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- DESOUZA, R.R. AND R.C. VOGT. 1994. Incubation temperature influences sex and hatchling size in the neotropical turtle *Podocnemis unifilis*. *Journal of Herpetology* 28(4):453-464
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- GUTZKE, W.H.N. AND G.C. PACKARD. 1987. Influence of the hydric and thermal environments on eggs and hatchlings of bull snakes *Pituophis melanoleucus*. *Physiological Zoology* 60(1):9-17
- JANZEN, F.J. 1993. The influence of incubation temperature and family on eggs, embryos, and hatchlings of the smooth softshell turtle (*Apalone mutica*). *Physiological Zoology* 66(3):349-373
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## FEATURES

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### A SILVER LINING TO A DARK CLOUD

From May 12-14, 1995 I had the opportunity to attend the Sharon Springs annual rattlesnake roundup. Sharon Springs is located in northwestern Kansas and the Prairie rattlesnake (*Crotalus viridis viridis*) is the unlucky guest of this roundup. A carnival atmosphere surrounds the festivities which centers upon the carnage of an animal species. Vendors from all over the U.S.A. came to the roundup to sell their wares, and there is food, music and even belly dancing.

A group of about 6-8 men, who call their association *Fangs and Rattles* traveled from Texas to demonstrate their snake handling ability and knowledge about snakes. According to the logo on the back of their jackets *Fangs and Rattles*, are on a "1995 world tour". I wondered were they where going to find rattlesnakes in the old world but failed to question any of them about this. *Fangs and Rattles* are hired by roundup organizers as showmen, to work the pit. They make the public aware of the dangers associated with rattlesnakes, with a great amount of pomp and show. It didn't take long to realize however, that most of their "facts", were erroneous and full of folklore and fiction. These people are far from being professionals, and if anything they provoke the public with fallacies encouraging an even greater fear of snakes. Their performance consisted of blatant machismo, which indeed may be the reason many of them are snake handlers (Love, 1995). They show the public the fangs of rattlesnakes and their monologues were filled with talk about death and morbidity. The highlight of their show consisted of kissing rattlesnakes on the head, inducing the snakes to strike, and kicking and pushing snakes with cowboy boots. Overall I found that these self-called "professional handlers" had little knowledge of the snakes natural history or their biological importance. When one considers that horses kill more humans each year than snakes, 200 for the former compared to 4-12 for the latter (Garret, 1994), one has to wonder why there are not horse roundups demonstrating the dangers inherent to these large four-hoofed animals!

Another organization active in rattlesnake roundups is the National Crotalid Society (N.C.S.). N.C.S. has a quarterly newspaper entitled *N.C.S. News*, which states that they are "America's ONLY Snake hunter's Newspaper" and that they are "Dedicated to the preservation of the species and the hunt through education". According to the Executive Vice President, whom I met at the roundup, the newsletter wants to include educational articles on the conservation of the species, humane treatment of captured snakes (which are crowded into a plywood box without food or water for

several weeks), information on snakebites, where to hunt rattlesnakes, along with a list of all roundups throughout the United States. Kansas is not the only state to hold roundups; there are 39 roundups in seven different states scheduled for 1995. We should be thankful that the Utah Division of Wildlife and Resources does not condone such activities in Utah.

There was a silver lining however, to this dark cloud. The legendary herpetologist and natural historian Henry S. Fitch, from the University of Kansas was also at the roundup. He attended for the purpose of collecting data from the animals. Dr. Fitch and his assistants were specially interested in obtaining information on sex ratios, weights, lengths and rattle measurements. I had the good fortune of being able to assist him in collecting the data, and was thrilled and amused at the many stories and experiences he shared with me. I was amazed at the restraint he demonstrated with the roundup organizers. He always stopped and answered any questions directed to him, and in easy layman terms. Although he did not like the idea of rattlesnake roundups, he was courteous and very polite. I, however, not understanding why the humble rattlesnake deserved such ungrateful attention from the roundup sponsors and audience, had to bite my tongue several times as to not compromise my position.

Fewer than 200 snakes were collected at this roundup, which is far less than at some of the major roundups in the country. For example, some roundups in Texas gather more than 50,000 snakes annually (Garret, 1994). The Sharon Springs roundup has a "slot size" set by the Kansas Fish and Game, for animals collected. Hunters can only legally capture snakes greater than 18" in total length, and can only collect for two weeks prior to the roundup. This size limit appears useless however, on account of the greater mortality present in juvenile snakes. For a snake to reach adult size is a feat in itself (for more information on the life history of rattlesnakes see Klauber, L. M. 1972. *Rattlesnakes Their Habits, Life Histories, and Influence on Mankind*. University of California Press). Some of the collectors informed me that many of the snakes were collected more than two weeks prior to the roundup, so time limits apparently do little good. After all of the hoopla and showmanship the snakes meet the most ultimate humiliation, they are all butchered and eaten by the crowd.

In my opinion the only way to stop these roundups is through proper education. Rattlesnakes are not only unique animals, but part of the natural cycle. They are also a part of our heritage. What other animal has a bell on it's tail which warns an intruder, as if saying, "DON'T TREAD ON ME"?

GARRETT, CLAY M. 1994. Messin' With Texas: Rattlesnake Roundups. *The Vivarium*. 6(3):8.

LOVE, WILLIAM B. 1995. What Hooked Us on Herps? *The Vivarium*. 6(6):34-36.

Robert Nohavec  
Salt Lake City, UT.

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## HUSBANDRY & HERPETOCULTURE

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### THE INTERNATIONAL HERPETOLOGICAL SYMPOSIUM DENVER, COLORADO JUNE 14-17, 1995

Another symposium come and gone and I'm still trying to process all the information presented. This was the fourth conference I have attended and probably the best one yet. This one was good not only because of meeting old acquaintances and making new ones, but also for the amount of quality information dispersed.

UtAH was well represented for its size. Breck Bartholomew, Rush Larabee and his son Jason, Louis Porras (VP of IHS) and myself all attended.\*

Wednesday was officially registration only but most of the time



was spent greeting old friends, catching up on the past and keeping hydrated.

Thursday started off early at 8:00 a.m. with Howard Lawler, President of IHS, giving a greeting and opening remarks before announcing the first speaker who was Richard Vogt, Ph.d. because the keynote speaker failed to show. Dr. Vogt started the conference very well by giving an overview of herpetology in Mexico and Brazil and its progress. He then went into his scheduled talk on "Turtle Ecology of Neotropical Mexico." He has done some extensive reproductive research on some of the species located there.

Next came one of my favorite four talks. David Chiszar, Ph.d., who teaches at the University of Colorado gave an energetic speech on "Behavior of Captive-Born and Wild-Caught Rattlesnakes." I only wish that I could have had one university teacher with this man's spirit and charisma. He made it very easy to listen to and absorb information. I hope I get to hear him many more times.

Another very good presentation was by Karl Switak on the "Natural History of the Green Tree Python." He showed slides from his trips to Papua New Guinea and related his personal observations on this wonderful species. He also was not shy about stating his opinion about a couple of subjects that disturbed him. I had to agree with him on all counts.

Unfortunately, one of the talks that I and several others were looking forward to didn't take place because the authors didn't communicate. Each thought the other was doing the work so we didn't get to hear about "Reptilian Egg Incubation: A Review of Incubation Techniques and Egg Care." Thanks alot guys!!!

The capper for Thursday was an icebreaker where we again tried to stay hydrated and then a wonderful three part audi-visual presentation by David Dennis and Eric Juterbock. These were wonderful slides of animals, their habitats and the people or things for which some animals were named. SIMPLY WONDERFUL!!!

Friday started off with a very fine presentation by Amaya Gonzalez-Ruiz from the National University of Mexico at Iztacala about the Herpetology Laboratory. Her English in no way detracted from her talk about how the "Vivario" generates continuous information about the biology and husbandry of native species, educates the public about their natural neighbors, educates a growing number of herpetologists and last but not least, serves as a recovery center for donated animals. A very worthwhile cause should you have a need to donate your pesos to something.

Another highlight for Friday was the panel discussion and debate "Are Captive-Born Reptiles Suitable For Release?" This discussion raised a lot more questions than it answered, which just showed that a lot more field and laboratory work needs to be done before any simbalance of answers are found.

Friday was capped off with a visit to the Denver Zoo and their new Tropical Discovery area. Some of us were wondering if we would get there because of some questionable transportation (a school bus probably older than myself). Eventually we all made it and were treated to a nice buffet dinner served under canopies on the zoo grounds. We then did a tour of the new area (both public and behind the scenes).

Saturday was another day of presentations highlighted by talks by Ross Prezant, D.V.M., and Philippe de Vosjoli. These gentlemen were each later presented with a Josef Laszlo Memorial Award. This award is given to the presenter of the best talk which emulates the dedication to herpetology of the late, great Joe Laszlo.

Ross Prezant, D.V.M., talked about emergency triage and first-aid for the non-veterinarian. A lot of good tips and ideas were presented so that the private breeder could stabilize an animal before getting it to a professional care-giver.

Later that afternoon Philippe de Vosjoli gave an excellent pictorial and oral presentation on "Naturalistic Vivarium Design." He showed everything from setting up a semi-aquatic habitat to planting and maintaining a desert motif. He included suggestions on hydroponics for some of the plants and also how to accommodate epiphytic species.

Some of his vivariums have been established for years with the animals producing young with very little maintenance beyond feeding. This is leading towards the way the Germans and other Europeans have been doing herpetoculture for years.

Saturday's finale was a nice banquet at the hotel followed by tributes to Dr. Roger Conant, Dr Hobart Smith and James Murphy. It was great to hear about these people who have played big roles in herpetology. These tributes were presented by people who have been directly affected. Tales were told that probably will never show up in a biography.

A very spirited auction followed the dinner, at which a varied selection of herpetology related items were sold. As in any auction, some items went for a song while others brought a LITTLE more than expected. Fun was had by all that stayed the course.

As with any conference or symposium, I guess, for all the good and great presentations, there has to be a few borderline and very bad talks. The major reason to me that these people failed was because of poor preparation. I saw people with notes horribly out of order, people with no notes, people who acted as if the audience would stone them if they made a mistake and people who did nothing but show questionable quality slides and not follow their abstract. This included individuals from the private sector as well as D.V.M.s!

Even with the downside talks, the overall conference was great. Applause must go to the I.H.S. staff and commitees and also to the Denver Zoo staff for the time and effort put in to overcome all obstacles and bring off another memorable symposium.

If you can in the future, I recommend that everybody attend the I.H.S. It can only enhance your hobby/business interests. In 1996, the symposium is going to be in San Antonio, Texas and for 1997, let's all head for COSTA RICA!!!!!!

Be There!

Stan Draper  
Salt Lake City, UT

*\*Other Utah members were also present as well as some Utahans that are not Utah members. At the meeting we were able to recruit another 7 members bringing our total to 102 members.*

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## BOOK REVIEWS

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### A FIELD GUIDE TO REPTILES AND THE LAW BY JOHN P. LEVELL

State reptile and amphibian laws vary considerably. Some states protect very few amphibians or reptiles with simple regulations (e.g., Montana) while other states protect many herps with very complicated regulations (e.g., Utah). In addition, there are federal regulations which must be considered when keeping and transporting herps. Trying to obtain accurate information from all fifty states as well as the appropriate Federal agencies is a daunting task; one that is rarely met with success.

The most recent attempt to summarize the various state regulations was that by Allen (1986). Since Allen's summary of state laws, many states have dramatically changed their amphibian and reptile laws. The need for an updated version is great, especially since interest in herpetology has (is) increased many fold since 1986.

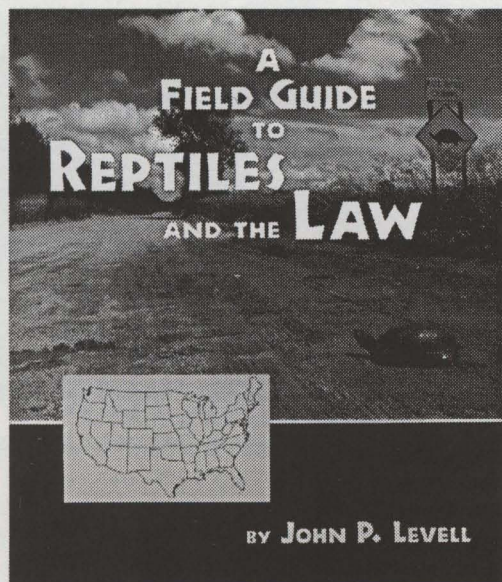
When John Levell began the task of updating Allen's list, he quickly found that the information given by many states was incomplete or inaccurate. Although this may sound bad, it is understandable when you consider that different state agencies may have laws covering amphibians and reptiles. You wouldn't expect an Department of Agriculture employee to be fluent in the many complicated laws of the Division of Wildlife Resources nor visa-versa. After realizing this lack of complete information Levell



decided to go straight to the horse's mouth and look up the actual laws in a law library.

*A Field Guide to Reptiles and the Law* is not the type of book you just sit down and read and very few people are qualified to review the entire book. I have chosen to examine the sections of the book that I am qualified to review and to assume the rest of the book is as accurate or inaccurate as the sections I reviewed.

The introduction of the book explains how to use the book. Basically the book contains sections on CITES regulations, federal regulations, followed by regulations for each of the fifty states, an appendix of important addresses, an index to protected species, and a bibliography. Each of the state sections is divided into four categories: Endangered, threatened, and special concern species; native wildlife regulations; importation and commercial trade



regulations; and captive maintenance regulations.

The summaries of CITES and federal regulations are accurate, up-to-date and easy to understand. The CITES section includes a list of all Appendix I, II and III species of reptiles and amphibians and explains the significance of each Appendix to the herpetologist. Federal regulations include a list endangered and threatened species as well as information about the regulations.

The bulk of the book is occupied by state regulations, which are organized alphabetically with thumb tabs for quick reference. I was only able to review the Utah section of the state regulations. Since Utah recently updated/revised the amphibian and reptile laws (April 1995) I expected to find the old laws presented in the book. Fortunately, I was pleasantly surprised to find Levell had included the new regulations. Although the regulations are presented in the book's format rather than the legal format of R657-3, the information is accurate with few errors. Only two errors were noticed and these are relatively unimportant. Levell lists the old application fees rather than the new fees which are simpler and much more expensive. The other omission is the captive breeding permit regulations for native California kingsnakes and Great Plains rat snakes. This section is only relevant to Utah residents and does not distract from the usefulness of the book.

I can only assume that the other forty-nine states are as well represented as Utah is. If this is the case, this book will prove to be quite valuable for the next few years; until too many state's change their laws again. However, Levell is planing, on publishing periodic supplements to the book and eventually future additions as the need arises.

Now you may be wondering exactly how this book may be useful,

since you already know the laws for your state. Well think of the last time you were in another state and found an amphibian or reptile that you brought home. Was it legal or did you break state law and the federal Lacey Act? I frequently receive calls from people who just returned from vacation and want to tell me about the herps they brought back, so I know this is common. Unfortunately, I also have a habit of looking the species up to see if they are legal or not. More often than not the neat herps were illegally collected and transported. That is where this book will be of value. Think of it, for less than \$30.00 you can avoid breaking the law and potentially having to pay a fine of much more than \$30.00.

Certainly, this book is not for everyone, but if you plan to travel or go herpin' in another state, you should buy this book.

**Breck Bartholomew**  
Logan, UT

Allen, William B. 1986. *State Lists of Endangered and Threatened Species of Reptiles and Amphibians and Laws and Regulations Covering Collecting of Reptiles and Amphibians in Each State*. Privately Printed, Pittsburgh Zoo, Pittsburgh, PA.

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## CLASSIFIED ADS

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**For Sale:** 3'2" long female Savannah monitor with cage. Healthy eater. Very tame. Moving to Hawaii, must sell. \$100 obo, call John Walsh 801-373-8122.

**For Sale:** 2.1 Western hognose snake (*Heterodon nasicus*) \$40.00 each or \$100 for all three. Call Breck (801) 752-0297.

**Free:** Two (1.1) Arizona tiger salamander. Apparently they were collected in the Uinta Mountains and have been in captivity for a year or two. Call Breck (801) 752-0297.

**AMERICAN FEDERATION OF HERPETOCULTURISTS.** A nonprofit national membership organization of herpetoculturists, veterinarians, academicians, and zoo personnel involved in the captive husbandry and propagation of amphibians and reptiles. Membership includes the highly acclaimed *The Vivarium* magazine, dedicated to the dissemination of information on herpetocultural accomplishments, herpetological medicine, breeding & maintenance, field studies and adventures, enclosure design and much more. Membership in the AFH is \$26.00. Send information requests to, AFH-News, PO Box 300067, Escondido, CA 92030-0067.

**Have a computer? Call Herp-Net!** The Herpetology Network is an Information Service that connects hobbyists, veterinarians, zoo keepers and students interested in reptiles or amphibians. Callers can read news, submit questions, scan legislative updates, book reviews, and download hundreds of text, graphic, and even audio files 24 hours/day. Free guest access. Ten lines connected to 215-464-3562 for fewer busy signals. Any communicating computer or terminal can connect at virtually any modem speed (High speed access is 215-698-1905 for 14.4) Herp-Net is a non-profit, all volunteer project. For information write: Mark Miller, System Administrator, P.O. Box 52261, Philadelphia PA 19115-7261 or send e-mail (Internet) to: mark.miller@mail.tju.edu

**Reptiles Magazine Indexed:** Locate every reference in Reptiles Magazine from the beginning. Every species mentioned, where the photos are. English and Latin names. Updated Monthly. Single issue \$5.00, full year subscription (4 issues, sent quarterly) \$18.00. Send Check or Money order to Reptile Index, 7354 Cardigan Circle, Atlanta, GA 30328/404-396-4414.



**Next Meeting:** Wednesday July 26, 1995 at 7:00 pm in room 212 of the University of Utah's Biology building. **Dr. Dennis Bramble** will present a talk entitled "**Evolution and Biogeography of Gopher Tortoises.**" After the talk there will be a drawing for Herp Clock. There will be a raffle if some one donates a captive born animal.

**Future Meetings:**

26 Sept. 1995

**Jane Perkins**

Nov./Dec.

**Lara Carroll**

*Hypsiglena torquata* from  
San Juan County, Utah



**Utah Association of Herpetologists**

195 West 200 North

Logan UT 84321-3905

USA